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ABSTRACT

The so-called "drug abuse problem" in America is really a constellation of separate but related problems; since a variety of drugs are illicitly used, and drug abuse leads to many derivative problems, both within and outside the United States. This monograph begins by assessing the current state of the drug abuse problem in America, and analyzing specific policy issues in relation to the ongoing government efforts to reduce the supply and demand for drugs. After an overview and critique of current approaches to both supply reduction and demand reduction. The study recommends a series of policy initiatives. Demand reduction initiatives include: (1) developing knowledge for more and better prevention techniques; (2) educating people in key roles to deal with drug abuse; and (3) using the influence of the mass media. Supply reduction initiatives include conducting epidemiological studies in trans-shipment and supplier countries and increasing public awareness and prevention programs in these countries. (TE)

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POLICY ISSUES AND THE DRUG ABUSE PROBLEM IN AMERICA: OVERVIEW, CRITIQUE, AND RECOMMENDATIONS

A paper commissioned by the Kaiser Family Foundation

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Defining the Problem

The so-called "drug abuse problem" in America is really a constellation of somewhat separate but related problems, since quite a variety of drugs are illicitly used.[1] The illicitly used drugs can be grouped according to the legal status of their production and distribution: for example, there are many which are illegal either to produce or to distribute -- marijuana, most hallucinogens, cocaine, heroin, and some opiate drugs. At the other extreme, there are a few psychoactive substances which can be legally produced and sold without restriction -- primarily the inhalant drugs, such as glues, aerosols, solvents, gasoline, and (in some states) butyl nitrites. In the middle, there are those which can be produced and distributed legally for medical purposes, but only under strictly controlled procedures, including the necessity of a physician's prescription for a user to acquire them. This category includes such psychotherapeutic drugs as controlled stimulants (primarily amphetamines), sedatives (including barbiturates and methaqualone), tranquilizers (primarily minor tranquilizers, such as Librium or Valium), and a number of narcotics (synthetic or natural opiate derivatives, including some cough suppressants, anti-diarrheal medications, analgesics, and methadone).[2] However, while there exists a legal production and distribution system for these controlled therapeutic drugs, they are sometimes produced illegally, smuggled into the country, diverted from legal distribution channels by theft, prescribed inappropriately by "script doctors," or are secured illegally from drugstores by prescription forgery or theft. Thus, these drugs are often acquired illegally and are used without medical supervision, usually for recreational purposes.

It has been clearly established that there is a high degree of positive association or intercorrelation in the illicit use of all these various substances -- that is, users of one class have a substantially higher probability of being users of each of the other drugs than do non-users. In fact, we now know that if someone has used any of the drugs other than marijuana illicitly, he or she is almost certain to have used marijuana previously. (The possible exception occurs in the case of inhalants, the use of which tends to start and end at a fairly early age.) Similarly, if someone has used heroin, he or she is almost certain to have used marijuana *and* one or more of the other illicit drugs previously. In other words, to a certain degree there is an orderly progression into deeper involvement with illicit drugs. Further, alcohol and cigarette use are known to be earlier steps in that orderly progression (Johnston, 1973; Kandel, 1975; O'Donnell and Clayton, 1982; Yamaguchi and Kandel, 1984).

We have come to refer to "the drug abuse problem" in the singular partly because of this high degree of intercorrelation among the illicitly used drugs and partly because of the simplification in communication which results from talking

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1. While alcohol and cigarettes bear a statistical and developmental relationship to the other psychoactive drugs, and while their use is illicit for younger age groups, they will not be discussed in any detail in this paper, since separate policy papers have been commissioned to deal specifically with them.

2. From the national high school surveys it has been determined that all of these classes of psychotherapeutic drugs have shown a decline in the frequency with which they are prescribed to children by physicians, the exception being the narcotic drugs. Also, methaqualone is no longer legally manufactured, which undoubtedly contributed to the substantial decline in the illicit use of this drug over the past several years.

about one rather than many problems. For much the same reasons this same convenience will be used in the present paper. However, the reader is reminded that really there is a constellation of different drug use problems and that to some degree people's motivations for use are different for different drugs (Johnston and O'Malley, 1986).

In this paper no particular attempt will be made to distinguish between use and abuse, since there is little consensus in how the latter should be defined. Some argue that any illicit use is abuse, since it is illegal. The definition of abuse which seems more useful to this author is "any use or pattern of use which has adverse effects on the user's physical, psychological, role, or general social functioning or performance." (Role functioning would include functioning in school, work, and family, at a minimum.) The multidimensional nature of this definition makes it obvious, perhaps, why there are difficulties in reaching consensus about the criteria for defining abuse.

There does seem to be consensus that some proportion of users of many of these classes of drugs become psychologically and/or physically dependent, and that an even larger proportion of users suffer appreciable adverse consequences of the types listed in the above definition of abuse. Further, the fact that many of the personal costs are borne by adolescents and young adults makes the problem of even greater concern to the public and policy-makers.

Derivative problems for the society of its citizens' illicitly using drugs include: increased crime committed by users, substantial costs for law enforcement efforts and for treatment and rehabilitation services, lost productivity, accidents, and the strengthening of criminal networks involved in production and supply. The corruption of police, judges, and other government officials is another derivative cost.

There are also very substantial human costs beyond our borders that result from America's "drug abuse problem." Among them is the economic dislocation which occurs among very poor people who live in the producing areas. Their normal crops, such as coffee, are often removed to make room for more lucrative illegal crops such as opium poppies and coca plants. When and if the United States and the international community at large manage to shut down these producing areas and destroy the crops, the economic dislocation to the indigenous populations, who are often hovering on the edge of survival, can be tremendous. An equally insidious cost is inflicted on producing countries (and sometimes transshipment countries) by the degree of corruption which inevitably occurs when such enormous amounts of money are involved and government cooptation is sought. Government corruption is an easy state to induce, but one which may take decades to undo, given the self-perpetuating process of corrupt governments.

Finally, both producing and transshipment countries run a very high risk of developing severe drug abuse problems in their own populations, because the production and/or supply system is embedded within their own borders. To take a few examples, cocaine producing countries in South America have developed a serious problem of coca paste smoking among their children -- particularly their

"street" children. Transshipment countries in the Caribbean have become concerned about growing drug abuse problems among their youth, and in the opium producing countries of Southeast Asia and the Middle East (e.g., Burma, Thailand, and Pakistan) heroin use has become epidemic. These are all human costs which result from the drug abuse problems of the Western countries more generally, but particularly those of North America. They are all part of "the drug abuse problem."

The Current State of the Drug Abuse Problem in America

While more detailed epidemiological descriptions are available elsewhere (e.g., Johnston, O'Malley, and Bachman, 1986; Miller et al. 1983), a broad outline of the contours of the epidemic is useful for setting the stage for a policy discussion. Illicit drug use in North America reached epidemic proportions in the late 1960's; in the 1970's the epidemic expanded considerably. In the first half of the eighties we have seen the overall epidemic recede considerably, with the notable exception of cocaine. Cocaine use climbed further among adolescents in the eighties, remained at peak levels among young adults in their early twenties, and climbed some among older adults (Clayton, 1986; Johnston, O'Malley, and Bachman, 1986).

While the drug epidemic left the confines of our shores early in this twenty-year interval to become a global pandemic, other industrialized nations never attained such large proportions of their young people being involved as has the United States. Neither do their current levels of illicit drug use -- and in particular cannabis and cocaine use -- even begin to approach the levels found in America today.

Within two decades -- decades which spanned a very turbulent period in American history -- illicit drug use grew from a rare and deviant behavior among American young people to a statistically normative one. The epidemic spread from the nation's campuses, to others in the same age groups, and then down the age spectrum to high school students and eventually to junior high school students. Today nearly two-thirds of young people have at least tried an illicit drug by the time they leave high school, and 75-85% have done so by the time they reach age 27 (Johnston, O'Malley, and Bachman, 1986). For many, marijuana is the only drug tried, and for some it is tried only once or twice. However, some 40% have tried cocaine by age 27 -- a somewhat frightening number considering both the addictive and overdose potentials of this drug.

The spread of the epidemic *up* the age spectrum was much less dramatic, as older generations held onto their earlier norms; and what change has occurred in older age bands has occurred largely through generational replacement (Miller et al., 1983). This clearly suggests that adolescence is a critical period for the establishment of these drug-using behaviors, much as is true for cigarettes and to a somewhat lesser extent alcohol.

At the present time, the age groups having maximum illicit drug use are those in their late teens and early twenties. Cocaine is the only one of the illicit drugs to show a much higher rate of use among those in their twenties versus those in their late teens (Johnston, O'Malley, and Bachman, 1986; O'Malley, Bachman, and Johnston, 1984; Yamaguchi and Kandel, 1984). Figure 1 shows the age (actually the grade) of onset for illicit drug use, and how this has been changing in recent years. Figure 2 does the same for cocaine.

Cigarette smoking has been shown to be strongly associated with all forms of illicit drug use, and particularly with the use of marijuana, so efforts which are successful at reducing smoking may have the serendipitous secondary effect of reducing illicit drug use. While it is doubtful that all, or even most, of that association is due to the direct causal connection between them, very plausible hypotheses can be generated as to why some of the connection is likely to reflect a causal link (Johnston, 1986).

While there have been some long-term consistencies in the drug epidemic, such as the widespread popularity of marijuana and the tendency of young people to go through a certain predictable sequence of drugs before moving into the "harder drugs" (namely the use of cigarettes, alcohol, and then marijuana), the epidemic is also noteworthy for the wide fluctuations in the popularity of *particular* substances. For example, both PCP and methaqualone showed a rapid increase and then just as rapid a decrease in popularity during the past ten years. Daily marijuana use did much the same, but over a longer period: daily use among high school seniors stood at 6% in 1975, 11% in 1978, and 5% in 1985. Cocaine showed a dramatic increase in popularity late in the epidemic, and is about the only class of illicit drug to resist the decline of the past five or so years.

Many individual risk factors have now been identified -- too many to be discussed here -- but clearly central among them are poor adjustment in school and a more general pattern of deviant behavior. However, shifts in these individual risk factors can hardly account for the wide fluctuations in drug use observed in recent years, since these factors have not fluctuated very much according to results from the Monitoring the Future studies.

The causes of the onset and partial retreat of the drug epidemic are surely multiple and complex. While some are hard to prove empirically, the following interpretations are offered. In the sixties Timothy Leary and other proponents of mind expansion, inner-directedness and "dropping out," saw a convergence of their messages with the breaking of the achievement bonds of "the silent 50's." There was a generation ready for the message. Further, social control of children and adolescents was being eroded as divorce rates increased and a much larger proportion of mothers entered the labor force. The surrogate socializing agents -- namely the media -- have much less motivation to be concerned about what values and attitudes they are imparting to the next generation than do parents. Their primary motives, after all, are to sell programs and sell products, regardless of what it takes. The effects of these structural changes in the social control and socialization systems were then compounded by a major demographic change: the baby boom was reaching adolescence and by its sheer size was placing stress on

the ability of the educational and social control mechanisms of the society to function effectively.

Several major historical events coincided in time with these structural and demographic changes, and their cumulative effect was appreciable. Specifically, the advent of the Vietnam War and other subsequent politically and socially alienating events, like Watergate, had a tremendous catalytic effect on the popularity of drugs. The use of certain illicit drugs became both a symbol of defiance of "the system" and the older generation, as well as a symbol of solidarity among those of like mind.

As the somewhat naive earlier views of the drug movement were challenged by both scientific and experiential evidence of the adverse effects of many of the drugs, young people began to back off selectively. Methamphetamine use diminished as the word got out that "speed kills." LSD lost some popularity in the early seventies as reports of its effects on the brain and on chromosomes, whether well-founded or not, spread. Daily marijuana use fell by more than half, accompanied by a dramatic rise in the proportion of young people perceiving such use as carrying appreciable risks for the user. PCP use fell very quickly in the late seventies as its reputation on the street as a dangerous drug grew.

But certainly other factors also played a role in the reversal of the overall epidemic. Among those which seem most plausible were the passing of the Vietnam era; the wearing off of the "fad" quality of drug use; the sobering influences of the recession of the early eighties and the shortage of entry level jobs for the baby boom generation, which led to more concern with job attainment and thus school performance; the whole healthy lifestyle movement; and so on.

But while some of those, and perhaps other factors, may cause the epidemic to recede even further than it has, two major changes make it highly unlikely that this country will ever be able to attain the very low levels of illicit drug use seen in the 1950's. First, the vast production and supply network which now exists will make drugs accessible to American young people for the indefinite future. Second, there is now a widespread awareness among American youngsters of a whole range of chemical options for altering mood and consciousness. This was an awareness which surely did not exist in the fifties. In addition, the process of natural correction in use which occurs as the dangers of a drug become established and widely known, is overcome in the aggregate by the continual introduction of new allegedly "safe" drugs. Cocaine is a fairly recent example from the seventies, "ecstasy" (MDMA) a more recent one.

In just the past year or so, there have also been changes in the purity of some of the more important drugs as well as in the methods by which they are ingested -- changes which generally have meant that drug use is becoming more dangerous. "Black tar" heroin from Mexico is a very pure form, contrasting to normal street heroin which often is only 5% pure in the American market; thus more overdose deaths result. Cocaine is now available in an inexpensive "crack" form -- a smoked form which is purer than the normal powdered form of cocaine hydrochloride, and which thus can result in a much more rapid addiction, as well

as more frequent overdose. Marijuana is also reported by the Drug Enforcement Administration to be considerably stronger than ten years ago, although the importance of this for the user is yet to be determined, since users may well titrate their intake to get a desired level of effect. (In fact, national data from high school seniors suggest that there has been some decline in both degree and duration of the high usually obtained with marijuana.)

As of 1985 the decline in the use of most drugs appeared to have stalled among high school students while the active use of cocaine was rising. This leaves predictions about the future quite difficult. Clearly usage rates in this country are still very high by long-term historical standards, as well as by comparison with nearly all other countries in the world (with the exception of neighboring Canada). Thus, continued attempts to reduce the use and abuse of drugs remain a pressing item on the national agenda, and are likely to remain so into the foreseeable future.

The Policy-Making Structure

Before proceeding to specific policy recommendations, it seems worthwhile to discuss the existing policy-making structures in the United States. The structure is central, of course, because it determines the processes by which this society deals with, or fails to deal with, its drug problems.

Within this country, there appears to be broad consensus that drug abuse is an important problem, and that "something should be done about it." Indeed, drug abuse is regularly rated as a top priority in public opinion polls. What is lacking is much consensus about exactly what should be done. Nowhere is this lack of consensus more apparent than at the level of national drug abuse policy.

Over a dozen federal agencies are currently responsible, in some fashion, for developing and/or implementing drug-related initiatives. The sheer number and diversity of these agencies suggest the need for a coherent and coordinated policy approach to drug abuse. Yet, the Administration has been criticized in many quarters for not having a coherent or sensible strategy, and for offering more form than substance.

The First Lady, of course, has made the drug problem her primary issue of concern; however, her contributions are seldom policy-oriented. Within the White House staff there is a special advisor in charge of the Drug Abuse Policy Office, but that office appears not to have been particularly forceful in this administration.

The Attorney General appears to have become the administration's major policy proponent, and while he has given some attention to prevention initiatives (particularly the "National Partnership" from the private sector) they have not

turned out well.[3] He continues to urge the allocation of very substantial sums of money to law enforcement approaches; but his office also sponsored a meeting of all United States attorneys earlier this year to discuss the prevention of drug use. Unfortunately, it seems likely that such enforcement agencies, which likely will receive a fair proportion of any new federal prevention monies -- will be ill-equipped to spend them in an effective way.

Secretary of Education Bennett has recently spoken out about drug abuse in the schools, but mostly to express a hard-line "kick the users out" position. The Office of Education appears to have little interest in developing the knowledge base necessary to put forward more and better prevention programs in the nation's schools.

One organized non-governmental force in the drug abuse field, which has grown substantially in recent years, has been the so-called "parents' movement." Parent groups have been formed throughout the country to deal with the actual or potential use of drugs by their children -- an idea which is eminently reasonable. Two major umbrella organizations have evolved from this movement: the National Federation of Parents, and Parents' Resources Institute for Drug Education (PRIDE). Although thousands of local parent groups have been formed, according to the umbrella organizations, the number actually functioning at a given time is unclear. In any case, this grass-roots movement has developed a political voice and, with White House assistance and support, has received federal funding from the National Institute on Drug Abuse and ACTION.

While the basic idea of parents coordinating their dealings with their children and providing education and support for one another is inherently neither liberal nor conservative, the leadership of the national organizations have generally expressed a quite conservative philosophy. This stance has won the ear of the White House, of course, but has perhaps narrowed the attractiveness of the movement to the full spectrum of parents who might otherwise be interested.

Unfortunately, powerful political constituencies for a preventive approach to drug abuse have been lacking. The parents' movement has not been particularly supportive of the National Institute on Drug Abuse (NIDA), the primary federal agency responsible for the development of new knowledge to guide prevention activities, largely because NIDA failed to embrace the parents' movement and its philosophy without qualification. (For NIDA to have done so would have been highly inappropriate for a scientific research institute, of course, and would have severely damaged its reputation in the scientific community.) The new Director of ADAMHA, NIDA's parent agency, was largely selected by the parents' movement; and he is attempting to achieve rapprochement between the parents' movement and NIDA, since the movement should be a natural political

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3. The National Partnership, to which the Department of Justice gave $1 million, was intended as a very broad coalition of private sector organizations from the media, relevant industries, voluntary groups, etc. However, the coalition failed to coalesce, and was recently disbanded after public charges that the government monies were being used ineffectively if not improperly.

constituency for NIDA. The chances of any great success, however, seem rather slim.

Clearly, what is needed is a central focus for formulating national drug abuse policy. As the above discussion suggests, it is unlikely that policy leadership will be forthcoming from *within* the current federal policy-making structure. Accordingly, policy leadership might be sought *outside* the federal government.

There existed at one time the Drug Abuse Council, supported by a consortium of foundations; and during its existence it played an important role in the national dialogue over drug abuse policy. It was abandoned some years ago, however, and there now exists no visible, influential, non-partisan unit outside of government to analyze the field and offer alternative visions of the best ways for this society to deal with its drug problems. Ironically, this may be the era in which such alternative visions are particularly needed. Therefore, consideration might be given to once again creating a blue-ribbon group to debate and offer policy recommendations from an independent and non-partisan platform outside of government. It might also recommend the funding of policy-relevant research and fellowships in the field to its parent foundations. In addition to recommending policies at the federal and state and perhaps even community levels, such a Council could play a role in the development of new intervention approaches and in the facilitation of community action. It could for example, hold conferences dealing with policy development and program planning, provide resource packages and perhaps consultation for community action groups, and generally provide model programs for local action. It seems fair to say that the drug abuse problem has motivated a lot of people throughout the country to "want to do something," but that models for effective community action have been lacking.

Specific Policy Issues and the Drug Abuse Problem

Virtually all approaches to the drug abuse problem may be categorized as attempts either to reduce the supply of drugs or to reduce the demand for drugs. Supply reduction strategies range from foreign policy efforts dealing with other governments (e.g., the recent crop eradication efforts in Bolivia, and crop substitution in Southeast Asia), to interdiction and border control, to changing techniques for the apprehension of suppliers as well as prosecution and punishment policies for suppliers (e.g., seizure of assets laws). Demand reduction strategies, on the other hand, attempt to alter factors in the individual or his/her environment that predispose, reinforce, or enable drug use behavior. These strategies range from deterrence efforts based on law enforcement, to attempts to change individual knowledge, skills, and beliefs, to attempts to alter the social and/or cultural environment that supports or contradicts drug use (e.g., the mass media).

In this paper, only limited attention will be given to the specifics of supply reduction strategies, partly because it is this side which has received a very disproportionate amount of the attention of government in comparison with the complementary side of demand reduction. Indeed, it seems that the most serious and overarching policy issue in the drug abuse field has to do with the balance in

resources and emphasis addressed to supply reduction and control vs. demand reduction and control.

What follows is an overview and critique of current supply and demand reduction approaches. Recommendations for future policy initiatives in both areas will then be given in the last section.

Current Approaches to Reducing the Supply of Drugs

Policy issues surrounding the drug abuse problem are quite different than those related to the use of other consumable and abusable products, in that most of the illicitly used drugs are not legally manufactured, nor sold or distributed through legal channels to their ultimate consumers. Therefore, many of the points of policy intervention dealing with quality control and manufacture, labeling, advertising, point of purchase controls, taxing and pricing, etc., are beyond the normal span of government influence. This situation contrasts vividly, for example, with consumable products such as cigarettes or alcohol. On the other hand, with illegal drugs there exist some qualitatively different policy issues having to do with attempts to eliminate the illicit production and the illicit supply systems.

It seems that there is an almost universal governmental reflex to try to solve the drug problem with a supply-reduction, law-enforcement approach, not just in the United States, but in most countries. (Insofar as demand reduction is part of the strategy, it is again in the law enforcement mode, with the emphasis on catching and punishing users.) It also seems that in most Western democracies this reflexive approach has been relatively ineffective, for reasons which seem clear after some thoughtful economic analysis.

After all, drugs constitute a consumer market, albeit an illicit one, in which operate the same forces of supply and demand found in most markets. Basic economic theory posits that when demand for a product expands, the supply will expand to meet it (assuming that there is not a controlling monopoly or oligopoly) either as a result of current producers increasing production and/or as a result of new producers entering the market. When the market is extremely profitable, there will be a rush of new producers entering. They will tend to flood the market with the product and prices will tend to decline as suppliers compete with one another for market share and for optimizing their individual profits. That is exactly what has happened with cocaine in this country, for example.

It is common knowledge that the profit level in the illicit drug market is utterly enormous -- in the billions of dollars, perhaps the tens of billions. Therefore, from basic economic theory it seems predictable that there will be a continuous flow of new producers, wholesalers, and retailers scrambling to attain those enormous profits, until the profits get so low that they are not worth the costs (including the legal risks) of entering the market. It seems highly unlikely that profits ever will get that low in a Western democracy, where the most draconian measures are shunned: thus there will be an endless supply of suppliers as long as there remains an appreciable demand. Indeed, many people who might

otherwise have been law-abiding citizens have found their price and have decided to enter this highly profitable illegal trade.

With regard to international production, the fact that a fair proportion of the world's countries are not under serious international control means that production can always move beyond our international reach. Witness Afghanistan, Iran, Lebanon, and the Eastern bloc countries. Further, even some countries with a genuine commitment to international cooperation may not be able to eradicate production within their own borders, due to a lack of control over certain remote regions (e.g., Thailand, Burma, Colombia, Peru, and Bolivia). Thus, attempting to eliminate the supply through international efforts may show some short-term successes (e.g., as in Turkey and Mexico); but in the longer term, replacement supplier countries will continue to enter the market. Even in the highly unlikely event that we managed to attain a kind of global control on the production of natural drugs, such as opium and cocaine, the potential for chemical analogies is such that these natural drugs surely would be replaced by synthetics; and the control of synthetic drugs can be even more difficult, since the means of production are so much less visible.

In sum, despite dramatic efforts, and very large-scale investments of energy and resources by governments, it seems likely that we will not succeed in reducing significantly the production of drugs at the world level as long as the demand remains. Indeed, we have escalated our own expenditures on supply reduction dramatically in recent years, at the very same time that availability has increased in the United States.

It does not follow from this analysis that supply reduction is a strategy which should be abandoned. Undoubtedly we must continue to try to suppress the production and distribution of drugs. The major point is that by remaining totally obsessed with trying to win the unwinnable battle of supply reduction, as a society we have largely ignored the battlefield on which we could win the war, namely the battlefield dealing with the demand for drugs.

Current Approaches to Reducing the Demand for Drugs

At the federal level over 1.5 billion dollars per year is now being allocated on the supply reduction side, and it appears that the administration plans to increase the allocations there to perhaps 1.7 billion -- a roughly 200 million dollar increase. By way of contrast the National Institute on Drug Abuse, which is the federal government's main demand reduction agency, has an entire budget of perhaps 80 million dollars; and most of that is allocated to basic research. Applied research on prevention techniques, along with very modest programmatic prevention efforts, amounts only to about 7 million dollars. Thus, at the federal level there is an enormous imbalance (by a ratio of roughly 250 to 1) between the two very general approaches to dealing with this problem.

Of course, it can be said that federal monies for prevention are substantially larger, and that they are being distributed to the states through the block grant

program; and indeed, this was the intention of the original block grant legislation. But, in fact, much if not most of that money is being used for other things, given the shortage of funds for such critical areas as treatment. True prevention efforts are receiving much less support as a result. The other point to be made about state efforts is that the states are hardly in a very good position to be advancing the body of knowledge in this field, since the level of funds that each of those 50 state bureaucracies can allocate individually to the issue of knowledge development is simply inadequate to the task. (Individual communities are in a worse position.) Further, there is no reason to believe that the best talent for doing this work resides in whatever states might be willing to make the effort. The net result is that what little money is allocated to prevention across all levels of government is mostly allocated to implementing programs which are largely unproven and untested. At this point a virtually negligible amount is being allocated to knowledge development, a very important subject to which we will return below.

Demand Reduction through Coercive Methods

Society has traditionally attempted to reduce the demand for drugs though policy strategies based on legal deterrence and other social control mechanisms. Two of the most controversial of such policy initiatives have included changes in the legal status of certain drugs and recent initiatives to identify drug users through urine testing.

Legal Status of Drugs. Deterrence through legal sanctions is the most widely used approach for attempting to discourage many drug-using behaviors: such behaviors are rendered illegal by the state, and appreciable punishments are prescribed for infractions. The degree of enforcement effort, and the ability of authorities to successfully apprehend and punish those who break the law, obviously are critical moderating variables in determining the deterrent potential of the legal approach. So are the visibility of the behaviors in question and the willingness of the general public to report infractions of the law and to cooperate in prosecution.

In general, local law enforcement agencies have not placed a very high priority on the apprehension of drug users (as opposed to dealers). This may partly be because users are often seen more as victims than victimizers, but surely it is partly because of the extremely high numbers of users in recent years, in conjunction with the related fact that many are otherwise law-abiding citizens. Add to these the additional factors that (a) drug use is easily concealed and (b) that within certain age groups the norms have been sufficiently tolerant of drug use that there has been little cooperation with law enforcement, and it should come as no surprise that legal sanctions have not been spectacularly successful.

In the 1970's there was a far more active controversy than exists today about the proper legal status of drug use. Specifically, there was a strong demand for decriminalization of marijuana, which was the drug that received the most attention by public officials and the media during that decade. The arguments *for* decriminalization were numerous; but central among them was the notion that

apprehending, arresting, and giving criminal records to large numbers of American young people, who otherwise were law-abiding citizens, was not in the public interest. (In the peak years arrests for marijuana possession were averaging around 400,000 per year.) The major counter-argument was that the arrest and conviction of drug use offenders would help to deter the use of the drug among young people, in particular.

As it happened, a rather nice natural experiment occurred in the country, as a result of the fact that these laws are determined primarily at the state level. Some states decriminalized marijuana use, while the majority of states did not. Since the Monitoring the Future study was already ongoing, it provided the basis for a prospective study looking at drug use before, during, and after decriminalization in the states which decriminalized, and comparing trends there with usage trends in the states which did not. The results indicate that decriminalization during that period had virtually no effect on the levels of drug use among young people, nor on their attitudes and beliefs about drugs (Johnston, O'Malley, and Bachman, 1981). This failure of the change in the law to affect even attitudes and beliefs strongly suggested that there would be no longer-term effects on use, either. Other retrospective studies of decriminalization in particular states have come to much the same conclusion. There are questions, of course, about whether the rates of enforcement and prosecution, even in those states where use remained illegal, were such as to provide very much contrast to the decriminalized states; but it can be said with near certainty that, within the range of state policies that then existed, there was no evidence of a differential result coming from active decriminalization of marijuana.

Only limited generalizations can be made from such a conclusion, however. Marijuana was, after all, a very widely used drug among young people, and one which was widely accepted and consistent with the social norms of their age group. Thus, the symbolic impact of decriminalization would be expected to be very limited in that historical period.

It also should be noted that decriminalization and legalization are quite distinct things. The production, distribution, and sale of marijuana remained illegal even in decriminalized states, no advertising was possible, and so on. Recent calls by some social commentators for the *legalization* of drugs would involve a qualitatively quite different social action. Complete legalization likely would have a considerably greater impact on use than decriminalization, partly because the use of most other drugs remains highly illicit in the society and contrary to social norms (even among youth) and partly because legalization constitutes a far greater liberalization of the law. Under legalization, all of the policy issues having to do with production, labeling, advertising, purchase restrictions, taxation, etc. -- issues now found in the alcohol and cigarette areas -- would suddenly become germane.

Monitoring through Urine Testing. The difficulty of readily identifying users has long created an obstacle to law enforcement and to the implementation of certain other policy responses to drug use. For example, good identification techniques would facilitate the apprehension and punishment of users under the law, the removal of users from membership in organizations (e.g., school or place

of employment), the referral of users (often coerced referral) to treatment, the monitoring of former users or clients after treatment or incarceration, etc. The arrival in recent years of relatively inexpensive tests for detecting the presence in the urine of virtually all illicitly-used substances has thus engendered another heated policy debate in a field which has been noted for such debates.

Relatively non-controversial is the use of such tests for people in roles in which poor or impaired job performance could cost the lives of others -- such roles as airline pilots, train engineers, nuclear facility personnel, etc. The importance of public safety has generally been seen as overriding the privacy rights of the individuals in such roles; and research results showing that airline pilots have reduced performance even a day after smoking marijuana, for instance, have strengthened the case. Very controversial, however, are proposals put forth recently by the President's Crime Commission and others that urine screens be used without "probable cause" by employers generally, both as a condition of hiring, and at random intervals thereafter as a condition of continued employment. Such proposals are also under active consideration in the world of professional and amateur sports, and have been suggested by some for use in the schools as well.

Proponents, such as former NIDA Director Robert Dupont and former DEA Administrator Peter Bensinger, say that this is an effective way to ferret out and discourage drug use; that it will save industry a great deal of money by reducing poor job performance, absenteeism, accidents, and medical costs; that those who are living within the law have nothing to fear; and that the threat of drug abuse to the society justifies giving up a few individual liberties. Opponents, such as the American Civil Liberties Union, argue that these are draconian measures which are wrong and unconstitutional; that they amount to unreasonable search and seizure because they are carried out without probable cause; that many innocent people will be punished because of the inaccuracy of the tests; that they abridge the traditional assumption of innocent until proven guilty; and that what people do with their free time (e.g., on the weekend) is not the business of employers. (Drugs taken up to a week before the tests may still test positive -- particularly marijuana).

While surely there are conditions under which urine testing is appropriate, indiscriminate use on whole populations *would* constitute a significant erosion of individual freedoms and, largely because of the limited accuracy of the test results, has the unprecedented potential of finding a great many innocent people "guilty," with the inevitable result that they will be socially labelled and will lose rights and freedoms without due process. These are the types of injustices which Americans have traditionally found abhorrent, and they will again if these procedures become more widespread. The question is whether it will take the society a long time to learn the lesson, during which an exceptional number of injustices will abound, and whether a dangerous new precedent will be set for state-sanctioned intrusion into other aspects of people's personal lives. The issue is important and the very great public concern with solving the drug problem makes it politically possible that more extreme steps than should be taken, will be taken. Again, the existence of an authoritative nongovernmental body such as a Drug Abuse Council or a specially commissioned blue-ribbon panel, which would study the issue and render a public

report with recommendations, might go a long way toward preventing some of these unnecessary social costs.

One specific recommendation which such a body might make to help alleviate the rate of false accusations, for example, is that all positives be verified by a second (usually more costly) procedure, such as thin layer chromatography or radioimmunoassay. Another would be that results not be provided to those in positions of authority until the verification tests are completed. While not all sources of error are due to the laboratory test per se, at least the error from that source could be reduced very appreciably by the implementation of policies such as these.

Calls for complete legalization of drug use, as well as calls for the abandonment of civil liberties in an effort to contain society's drug problems through indiscriminate urine tests and searches, are both the dangerous result of a growing feeling of desperation in dealing with the drug problem. The difficulty is not that all other remedies would fail, but rather that we have continued to rely on the wrong remedies. Movement to the extreme in either direction would engender great social costs, with the distinct possibility that they would also fail to solve the problem.

Demand Reduction Based on Changing Attitudes, Beliefs, and Norms

So far, the demand reduction techniques being discussed have been those which rely entirely on the use of negative incentives or reinforcements -- including techniques for apprehension and punishment. These approaches are not aimed at changing the person, but rather at changing the contingencies presented by the environment as a result of drug use, and the probability that the consequences will be incurred. There is, however, an important additional class of interventions which do aim to change the person, and they are usually spoken about under the rubric of prevention. The so-called prevention approaches have been at times classified into three levels: primary prevention (which means reaching people before they ever start using drugs or a drug); secondary prevention (which means intervening early in the drug involvement process, before the users become dependent or chronic users of the drug); and tertiary prevention (which means dealing with people who already have an established drug abuse problem, i.e., treatment).

To deal with the last first, of the three types of prevention approaches the treatment of drug abusers has been the dominant focus of demand reduction to date. However, treatment may be seen as the result of society's failure to succeed at, or even to attempt to implement, the first two stages of prevention. It is dealing with the casualties; and it is a very expensive approach with rather limited success. While treatment of most drug abusers seems worth society's investment in terms of pay-back in productivity, reduced crime, and so forth, it is nevertheless very expensive per case and even more expensive per successful case. Recidivism rates tend to run high, approaching and often exceeding 50%. No policy interventions are being recommended here for this area of intervention. A good

deal of research attention has been paid, and is being paid, to the treatment area by the National Institute on Drug Abuse.

So-called secondary prevention would seem to hold promise in that those most at risk for drug abuse have begun to identify themselves by their early involvement, and thus scarce resources can be focused on those most "at risk" of developing a serious problem. The drawbacks in this approach, of course, are that the early users are not that easily identified and engaged in the intervention process, and further many are already well on their way to serious involvement, making successful intervention more difficult. Nevertheless, this appears to be an area in which some creative and positive approaches could be developed for early identification and intervention.

Primary prevention might be thought of in two subclasses -- selective and global. Selective primary prevention occurs when individuals or groups, judged to be at high risk for reasons other than their actually using drugs, are identified and resources are focused on them. The second category, which might be called global primary prevention, exists when all people in a population group are provided an intervention, whether or not they show indications of being prone toward drug abuse.

Given the extremely widespread nature of drug use among contemporary American youth, it would seem that global drug abuse prevention efforts are highly justified at the current time, and perhaps for the foreseeable future. Further, they need to start at a very early age given the age at which illicit drug use begins (see Figures 1 and 2). More focused or selective drug abuse prevention efforts may additionally make sense, even in the presence of global ones, however. In general it would seem that we should be exploring demand reduction using all of these types of approaches. As is discussed below, new mechanisms to increase the generation and refinement of additional approaches to primary and secondary prevention would be extremely valuable. Mechanisms which would bring about a realignment of the federal strategy to place a higher level of resource allocation on the development of a knowledge base for primary and secondary prevention would be equally valuable.

Recommendations

Demand Reduction Initiatives

1. Knowledge Development for More and Better Prevention Techniques

How might we go about developing a substantially larger knowledge base regarding effective prevention techniques? If one takes Donald Campbell's notion of "an experimenting society," one comes to see most knowledge on social engineering, or social intervention, as developing through a process of trial and error with evaluation. Of all the seemingly good ideas for preventing drug abuse (or for intervening in most other non-adaptive behaviors) probably 70-90 percent will prove either ineffective, or actually to result in adverse consequences, for reasons that are simply beyond the ability of the theoretician or social planner to forecast. (This seems now to be the verdict on most of the "good ideas" for drug abuse prevention that were popular into the seventies, like the "information approach" and the "alternatives approach;" see Schaps et al., 1981.) If one accepts this assumption, it means that it is critical to implement as many of the good ideas as possible in experimental designs, to evaluate them as rapidly as possible, and to identify the minority of programs that *do* work. Those programs can then be disseminated widely. Most important, the majority of programmatic intervention funds, which otherwise would have been wasted on ineffective programs, can be used on the effective ones.

Greater Resources. In essence, this means that a substantial up-front investment in knowledge development is critical for both effective and cost-efficient progress in the field. This means then that adequate resources are needed for knowledge development. Had adequate resources and efforts been allocated to this process over the past ten years, we would presently have a host of proven prevention techniques in our armamentarium. The sad fact is that they have not.

Clearly the scale of resources now being allocated, by society at large, to drug abuse prevention is grossly inadequate to the task at hand. One of the central policy objectives of the field, then, should be to bring about a reallocation of resources and emphasis -- particularly at the federal level -- on prevention research and prevention initiatives. The role private foundations might play in bringing about such a realignment is the important question here. While they can, and probably should, directly fund the implementation and evaluation of new and promising prevention approaches, perhaps more leverage can be obtained by helping to bring pressure for a changed strategy at the national level. Creating a permanent body such as the Drug Abuse Council would be one approach -- and probably the most effective in the long run. Creating visible temporary advisory bodies, such as a policy forum or commission would be another. Having several foundations co-sponsor such mechanisms may give them greater public visibility and credibility.

More and Better Ideas. There is another ingredient, however, to the recipe for successful knowledge development, in addition to the availability of adequate resources and political will. That is the presence of an appreciable number of creative and promising ideas. The field as a whole, as well as the federal agency responsible for supporting the field (namely the National Institute on Drug Abuse), have been far less successful at generating new prevention approaches than they might have been in the opinion of some observers. The National Advisory Council on Drug Abuse, which advises the Secretary of Health and Human Services on NIDA functioning, repeatedly urged in recent years that serious consideration be given to various think-tank approaches, whether short-term or long-term, in which people who might have valuable perspectives for social intervention in the drug abuse problem could have their ideas gathered and considered. After all, while it may be necessary for research scientists to be involved in the evaluation of particular intervention techniques, there is no reason to assume that they have a monopoly on the ideas which may be the best ones to try.

Surely people in a number of other roles, while not trained as research scientists and therefore not capable of designing implementation and evaluation designs, may well have some of the best ideas for intervention at virtually any level. Among the roles worth considering are people who deal with drug abuse clients, teachers, school counselors, school drug abuse counselors, young people who have been in the drug scene themselves, perhaps young people who have not been in the drug scene and who have managed to avoid it, parents of children of both types, police officers who work with this phenomenon on the streets, therapists who deal with adolescents, etc. The list could be expanded: the point is that many people from walks of life other than research are likely to have ideas, or to be able to collectively generate ideas, which are worth trying. In addition, the insights of social scientists should be gathered and/or stimulated in a more systematic manner.

It would take some considerable creativity and programmatic thought to design ways by which new prevention ideas might be extracted and/or developed and distilled, so that they can enter the agenda for active implementation and research. Since the federal government seems not well geared to developing processes to accomplish this goal, this would appear to be an area where private foundations could make a significant contribution with cost requirements that are within their means.

There could be a small planning group commissioned, for example, to design and establish idea-development mechanisms of various kinds. The techniques they might consider could range from intensive weekends, in which particular kinds of people are brought together for discussions, to more extended think-tank approaches where certain numbers of individuals are in essence commissioned, collectively or individually, to think about the problem from various perspectives and to develop ideas for interventions. The best ideas from such sessions would have to be recorded and written up. Then there would need to be a process for involving the proper types of people and/or organizations who would implement those ideas in actual programs, and evaluate their success in planned research designs.

A planning conference to develop ideas for such heuristic techniques would probably be an essential first step, perhaps involving people who have had experience in the past in these kinds of processes (such as the Delphi technique), as well as people who are familiar with the drug abuse world.

2. Educating People in Key Roles to Deal with Drug Abuse

Most people in roles where they might encounter drug abuse problems firsthand, are ill-equipped to deal with them -- people like parents, teachers, friends, and siblings. These are the people who are most likely to first come in contact with the symptoms of an emerging drug problem and the people who have real-life decisions to make everyday in relation to that situation. Those decisions are very often made in the breech, in that such people often are paralyzed either by their sincere hope that there is not a problem and/or by their lack of even rudimentary knowledge about what to do if there is one. There may not even be any very good standardized assessment techniques for use by professional drug abuse counselors, who as professionals have the task of evaluating the problem. Developing the competence of such people to both assess the problem and to intervene in the problem is surely an important part of secondary and tertiary prevention at the societal level, and perhaps another area in which foundations could play a role in which they would get high leverage from their investments.

Early steps might include commissioning papers on what resources and knowledge exist to guide people in particular roles (e.g., teacher, parent, sibling, friend) to deal with the possibility of a drug abuse problem; sponsoring a professional conference at which those papers would be presented and discussed; and helping to implement the next steps for the development of such resources which might be recommended by the conference participants. The last step, of course, is to disseminate the materials and knowledge so developed to people in the roles which need them.

3. Using the Influence of the Mass Media

The fact that drug use has shown swings far beyond what might be explainable by changes in individual risk factors strongly suggests that broader social trends in attitudes, beliefs, norms and lifestyles have played a very important role in determining drug using behavior. While major historical events such as the Vietnam War can hardly be manipulated as a matter of policy for the purpose of preventing drug abuse, media content which affects attitudes, beliefs, norms, and lifestyles *is* amenable to planned intervention. In this mass society the mass media obviously have come to play a critical role in the determination of these factors.

For example, in their programming they continually present to American children, who spend great quantities of their time watching television, role models. They also play a key role in bringing scientific and other factual information to young people -- a role which was particularly important in changing their beliefs

about the risks of heavy marijuana use. And the fact that television and radio are such powerful media, and reach so many children, makes them prime vehicles for persuasive "public service messages" directly aimed at preventing drug abuse.

In terms of policy intervention where limited resources might go a long way, developing techniques for influencing both the content of media programming and the availability and visibility of anti-drug messages in the electronic media would appear to be a high payoff area.

Alcohol/media researchers have provided writers and producers of prime-time television with feedback concerning the alcohol-related messages contained in their programming, and have provided suggestions for alternative messages. This "cooperative consultation" process has shown promise in improving the images of alcohol use presented on television. Similar strategies could be applied to drug related messages, both in television and in other mass media such as motion pictures. Panels which include industry representatives, and which are cosponsored by industry associations, might be established to help accomplish these goals.

The National Institute on Drug Abuse currently has a program of developing public service announcements (PSA's) in cooperation with the Advertising Council. However, their resources are meager (roughly $300,000 per year) as is the number of spots they develop. They developed the "Just say no" campaign of a couple of years ago and the "It's a lie" campaign against cocaine use, which was released this year. However, many more campaigns should be developed and far more effort should be made to get them aired, as well. While it is difficult to prove that this kind of material works, and indeed difficult to develop good material, a well planned and properly funded public service announcement campaign could have an appreciable cumulative impact over time.

In fact, after the first draft of this paper was submitted, a public announcement was made that the American Association of Advertising Agencies, in cooperation with the major media, would implement a large-scale media effort of the sort described here. They claim to be asking for donated resources -- particularly air time and print space -- worth a half-a-billion dollars per year. Even if they fall short of their goal by a considerable margin, this would be a gigantic effort compared to anything which has preceded it. Assuming that it is carried out in a way such that it retains credibility with American young people -- and this is an absolutely critical assumption -- it has the potential to shift social norms in an anti-drug direction much faster than has been occurring spontaneously. Further, the fact that they would be moving with the tide, instead of against it, greatly increases the probability that such a program will be a success.

Supply Reduction Initiatives

1. Epidemiological Studies in Transshipment and Supplier Countries

One foreign policy approach persistently urged upon the State Department by some of us in the field, but with only limited success, is to encourage and assist transshipment and supplier countries to develop epidemiological studies of drug use within their own populations. The logic is that, if they determine that there exists a serious drug problem among their own children (and many countries will) and if this fact becomes widely known in the population, political pressure will build from *within* the country to deal aggressively with the supply industry. This would create a countervailing pressure to the corrupting efforts of suppliers to buy off the favor of the government. A small preliminary effort at the Pan American Health Organization (PAHO), which was sponsored by the State Department and included a survey of governments and of technical resources available, determined that a number of Latin American and Caribbean countries (including important supplier and transshipment countries) *are* interested in such epidemiological work. Unfortunately, interest appears to have waned at the State Department, which has returned to such ineffective and very expensive efforts as "Operation Blast Furnace" in Bolivia.[4]

It could be that modest support of a PAHO effort by outside funding groups would breathe life into a program which would seem to hold considerable promise for increasing international cooperation in supply reduction. This does appear to offer a low-cost point of high leverage, and involves an extremely benign foreign policy intervention. More details could be provided on request.

2. Public Awareness and Prevention Programs in Transshipment and Supplier Countries

Ironically, one important approach to reducing the supply of drugs in North America may be the export of *demand* reduction strategies to transshipment and supplier countries. Clearly, the participation of these countries in drug production and shipment can be traced, in part, to a social climate that accepts (or is resigned to) drug use. (In fact, the parents' movement already has been encouraging grassroots efforts comparable to their own in other countries.)

Governments have approached experts in the United States for guidance in developing demand reduction strategies in the past, but funding for such consultation has been limited. American foundations might facilitate and encourage development of prevention activities in other countries either by directly sponsoring international conferences on the subject, as well as some modest projects in other countries, or by assisting some international bodies, such as the Pan American Health Organization, to do so. Not only would such activities help

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4. "Operation Blast Furnace" was the name given a recent fiasco in which American troops, helicopters, and support equipment were used to transport Bolivian troops into the jungles of that country to capture and destroy cocaine producing laboratories. Advance publicity, however, left the invaders empty handed, though it did not deter them from declaring the operation a "victory."

to stimulate a prevention movement in other countries, as well as to export our relevant knowledge; but knowledge relevant to prevention efforts in this country might also be gained as a result of experiences elsewhere with different prevention approaches.

Epilogue

Sometimes fortunately, but sometimes unfortunately, the drug abuse issue has been a hot political issue since the Nixon era. The fortunate part is that the problem gets attention: the unfortunate part is that the realities can be distorted for political ends. The present Administration, having now been in office for six years, has tried to emphasize the improvement which has been made in the drug area. The Democrats in Congress -- in particular Charles Rangel. Chair of the House Select Committee on Narcotics -- are taking every opportunity to show how serious certain drug problems have become (e.g., "crack" cocaine) during the Reagan administration. They emphasize the inadequacy of the treatment system, and in general a lack of adequate overall response. The reduction in federal support as a result of cutbacks in the block grant system makes the Administration vulnerable to such criticism.

Despite the Democratic complaints in the Congress, Congress so far has been relatively unsuccessful at bringing about an appreciable increase in resources allocated to demand reduction. Very recently, however, Congressional Democrats started sponsoring bills to greatly increase the level of federal activity in the demand reduction area. Even more recently the President announced a major new initiative for demand reduction; but while press reports in advance of his speech suggested that an additional $200 million would be allocated to such activities, his actual speech contained no budgetary specifics and rather few program specifics.

These large potential changes, taken along with the large media effort just announced in the private sector, may dramatically change the landscape discussed in this paper. Since both shifts are in the directions advocated above, I see them as clearly changing it for the better. However, there are "many a slip twixt cup and lip," and the extent to which the major policies recommended here become realities remains to be seen. There undoubtedly will remain important roles for private foundations in this arena, though what they will be may change some with these new developments.

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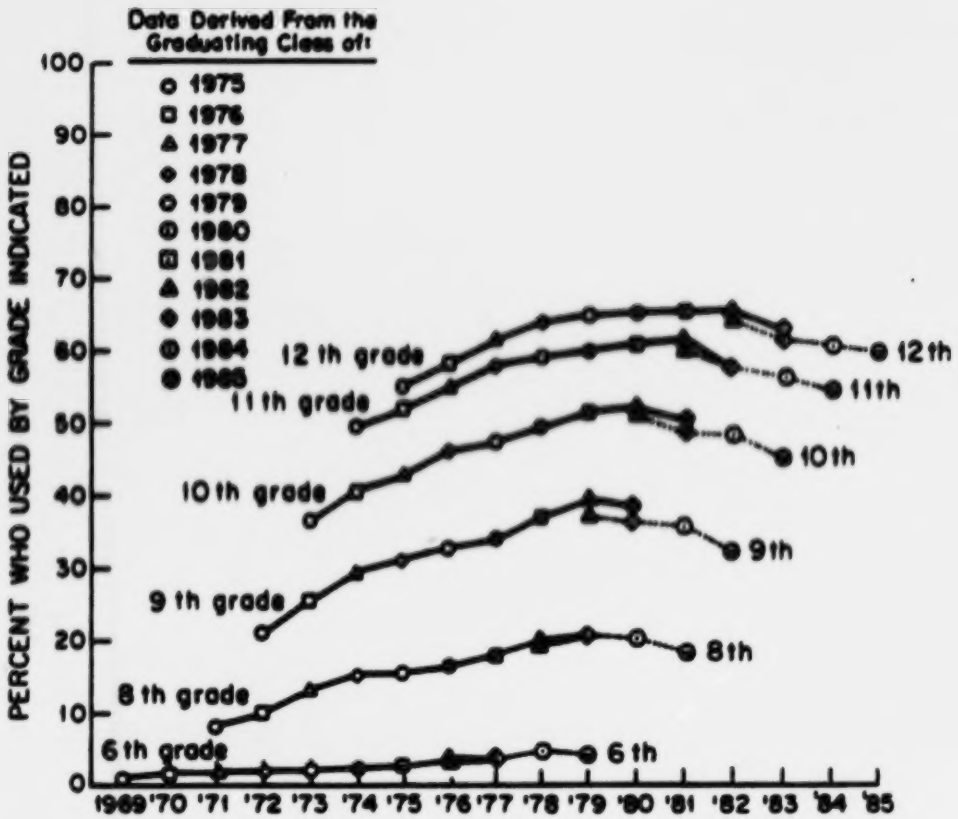
FIGURE 1

Use of Any Illicit Drug: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors Nationwide

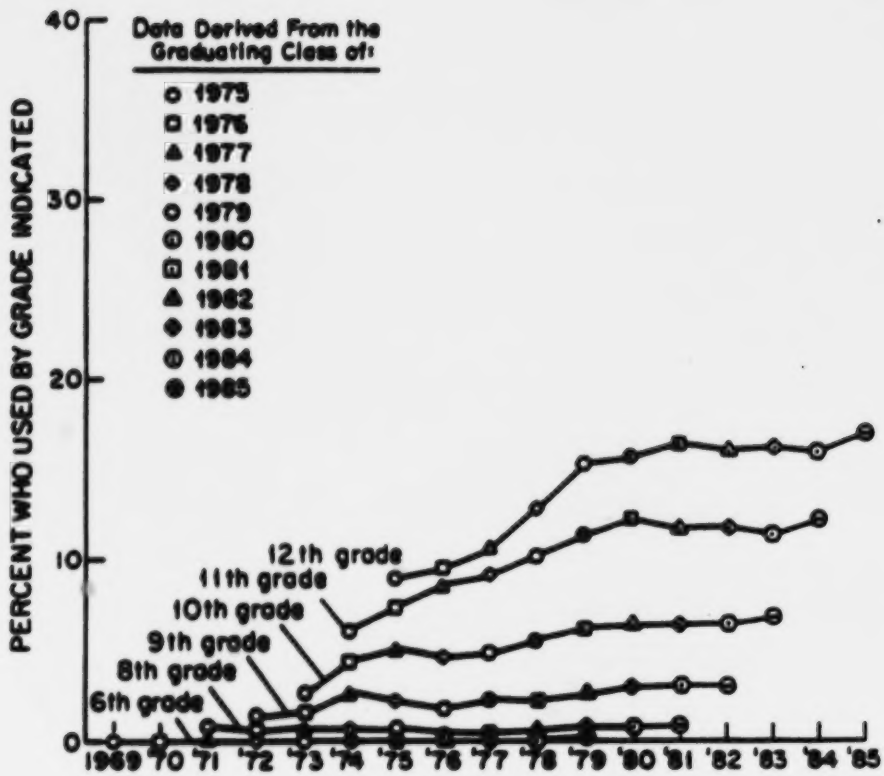


NOTE: The dotted lines connect percentages based on revised questions in which non-prescription stimulants are more explicitly excluded.

SOURCE: Johnston, O'Malley, and Bachman (1986).

FIGURE 2

Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors
Nationwide



SOURCE: Johnston, O'Malley, and Bachman (1986).